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09/786,357	03/14/2001	Jong-ju Choi	CH013001/REF	6103

7590 08/01/2003  
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EXAMINER

NGUYEN, TUNG X

ART UNIT PAPER NUMBER

2829

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application N .

09/786,357

Applicant(s)

CHOI ET AL.

Examiner

Tung X Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 17-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-25 is/are allowed.
- 6) ☒ Claim(s) 26 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 18, 27 are objected to because of the following informalities:

As to claim 18, "the images of bottom vie" recited on page 3, line 4, should read -  
-- the images of bottom view---.

As to claim 27, "two or ore" recited on page 6, line 10, and should read ---two or  
more---.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claim 26, the phrase "**or the like**" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like") thereby rendering the scope of the claim(s) unascertainable. However, the phrase "**such as**" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 26 is rejected under 35 U.S.C. 103(a) as being obvious over Yamanaka (u.s.p 5,138,180), in view of Sayegh (u.s.p 6,195,165).

As to claim 26, Yamanaka discloses in Fig. 2, an electronic component lead inspection device, the device comprising: a light source (12) for illuminating a light to the electronic component package (1); acquiring means (13, 14) for acquiring an image of the electronic component package; control means (16, 17) for outputting an image signal of the electronic component package acquired by the acquiring means; and inspecting and displaying means (18) for receiving the image signal of the electronic component package output from the control means to thereby inspect and display the image of the electronic component package (1). Yamanaka does not disclose the acquiring means further comprising a glass plate for permeating images of the electronic component package and for preventing the foreign objects. However, Sayegh disclose in Fig. 6B, the acquiring means considered as sensor (300) having a glass plate (328, 329) for permeating images and preventing the dust (col. 7, lines 20-30). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system of Yamanaka, and provide the acquiring means, as taught by Sayegh for permeating images and preventing the dust.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 27 is rejected under 35 U.S.C. 102(e) as being anticipated by Beaty et al. (u.s.p 6,072,898).

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As to claim 27, Beaty et al. disclose in Fig. 3a, an electronic component lead inspection device adapted to transmit an image of an electronic component package (70) by way of image transfer means (30, 32, 34, 36, 38) and to acquire the image transmitted by the image transfer means by way of a camera (15), wherein the image transfer means comprises: more than two reflecting mirrors (32, 36, 38) for respectively reflecting images of mutually facing side views of the electronic component package;

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and more than one right angle prism (30, 34) for combining images respectively reflected by the reflecting mirrors to transfer same to the one camera (15).

***Allowable Subject Matter***

7. Claims 17-25 are allowed.

8. The following is an examiner's statement of reasons for allowance:

As to claims 17, the prior art does not disclose an electronic component lead inspection device having particularly characteristic: control means for controlling the first light source to illuminate a light if the electronic component package is a gull wing type electronic component package and for controlling the second light source to illuminate a light if the electronic component package is ball grid array type electronic component package and for outputting an image signal of the electronic component package acquired by the acquiring means.

As to claims 18-25, the acquiring means comprising: a) the image transfer means for transmitting images of bottom view and side view of the electronic component package, the image transfer means having a first image transfer means for transmitting an image of bottom view of the electronic component package, and second and third image transfer means for combining images of mutually facing side views of the electronic component package to thereafter transfer same, and one or more cameras for acquiring the images of bottom view and side views of the electronic component package transferred through the image transfer means; b) image transfer means comprising a pair of reflecting mirrors centrally arranged at a housing for twice reflecting at right angle a bottom view of the electronic component package; four reflecting mirrors

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respectively disposed at for side views of the housing to reflect four side views of the electronic component package lengthwise of the housing; four right angle prisms mounted at four side views of the housing to respectively face the four reflecting mirrors to reflect at right angle the images of four side views reflected from the four reflecting mirrors relative to lengthwise direction of the housing, and two right angle prisms respectively disposed between two facing right angle prisms out of the four right prisms to combine images of two side views of the two facing electronic component packages.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 17-27 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X Nguyen whose telephone number is (703) 305-3337. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (703)-308-1233. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5841 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TN  
July 25, 2003

  
VINH P. NGUYEN  
PRIMARY EXAMINER  
GROUP 2829  
07/28/03